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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/649,105  | 08/26/2003  | Peter G. Webb        | 10004004-3          | 5480             |
| 7590  | 09/07/2006  |                      | EXAMINER            |                  |
| AGILENT TECHNOLOGIES, INC.<br>Legal Department, DL429<br>Intellectual Property Administration<br>P.O. Box 7599<br>Loveland, CO 80537-0599 |             |                      | KIM, YOUNG J        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1637                |                  |
| DATE MAILED: 09/07/2006   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/649,105             | WEBB, PETER G.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Young J. Kim           | 1637                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 June 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 20-22 and 24-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 20-22 and 24-34 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

The present Office Action is responsive to the Amendment received on June 19, 2006.

### ***Preliminary Remark***

Claims 1-19, 23, and 35 have been canceled.

Claims 20-22 and 24-34 are pending and are under prosecution herein.

### ***Objection, New Grounds***

The objection of claim 35 under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim, made in the Office Action mailed on March 15, 2006 is withdrawn in view of the Amendment received on June 19, 2006, canceling the claim.

### ***Claim Rejections - 35 USC § 112***

The rejection of claim 35 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, made in the Office Action mailed on March 15, 2006 is withdrawn in view of the Amendment received on June 19, 2006, canceling the rejected claim.

### ***Rejection, Maintained***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of claims 20-22 and 24-34 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, made in the Office Action mailed on March 15, 2006 is maintained for the reasons of record.

Applicants' arguments presented in the Amendment received on June 19, 2006 have been fully considered but they are not found persuasive for the reasons set forth in the, "Response to Arguments," section.

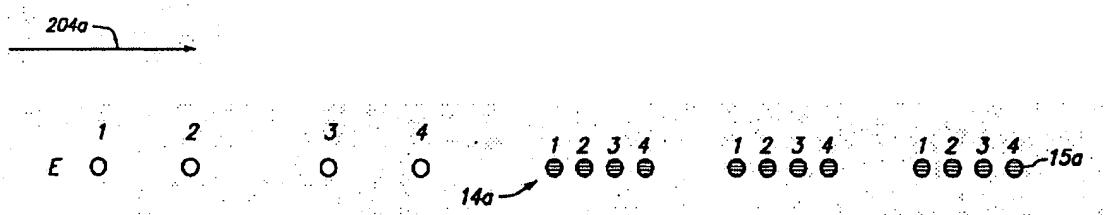
The Rejection:

Claim 20 is rejected as being indefinite for the following reasons.

Claim 20, step (c) recites the phrase, "each dispenser set depositing a drop set at a distance ahead of a drop set deposited by a preceding dispenser set...."

This limitation is confusing in view of what is being disclosed in the specification.

Figure 4A of the specification, when describing the first pass of the head system comprising multiple successive sets of dispensers, discloses that dispenser set E, while moving in direction 204(a) (or to the left direction), dispenses from dispensers 4, 3, 2, 1, in that order. For clarity the Figure is reproduced below:



Hence, for example, dispenser 3, deposits a drop set at position 3, which is not "ahead" of the drop set deposited by dispenser 4 (which is the preceding dispenser) but "behind" the drop set deposited by the preceding dispenser.

The claims are in contradiction to that which is disclosed in the instant specification and clarification is required.

Claims 21, 22, 24, 25, and 25 are indefinite by way of their dependency on claim 20.

Claims 26-34 are indefinite for the same reasons set forth above.

Response to Arguments:

Applicants traverse the rejection under the explanation that the head system comprises two heads (210a and 210b). It is respectfully pointed out that the claims do not recite that the head system comprise two heads, nor a plurality of heads, but rather “a head system with multiple successive dispensers.” The orifice on which a single head is considered to be multiple successive dispensers since each of the orifices (1, 2, 3, and 4, for the purpose of example), dispenses in a multiple successive way. Hence, Applicants’ arguments are not commensurate with the way the claims are being recited. Since all of Applicants’ arguments are based on this interpretation to which the claims do not recite, the arguments are not found persuasive and the rejection is maintained.

The rejection is maintained therefore.

***Claim Rejections - 35 USC § 102***

The rejection of claims 20-22, 24-28, and 35 under 35 U.S.C. 102(b) as being anticipated by Takahashi et al. (U.S. Patent No. 5,624,484, issued April 29, 1997) made in the Office Action mailed on March 15, 2006 is withdrawn in view of the Amendment received on June 19, 2006.

The rejection of claim 35 under 35 U.S.C. 102(a) and (e) as being anticipated by Blanchard, A.P. (U.S. Patent No. 6,028,189, issued February 22, 2000, filed March 20, 1997), made in the Office

Action mailed on March 15, 2006 is withdrawn in view of the Amendment received on June 19, 2006, canceling the rejected claim.

***Rejection, Maintained***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The rejection of claims 20-22 and 24-34 under 35 U.S.C. 102(a) and (e) as being anticipated by Blanchard, A.P. (U.S. Patent No. 6,028,189, issued February 22, 2000, filed March 20, 1997), made in the Office Action mailed on March 15, 2006 is maintained for the reasons of record.

Applicants' arguments presented in the Amendment received on June 16, 2006 have been fully considered but they are not found persuasive for the reasons set forth in the, "Response to Arguments," section.

**The Rejection:**

Blanchard discloses an inkjet apparatus comprising:

- a) a head system comprising multiple successive sets of dispensers (see Figure 3, four dispensers which dispenses nucleotides C, A, G, and T); and
- b) a transport system to advance the head system in the first direction with respect to the substrate (column 8, lines 29-32).

With regard to a processor communicating with the head system and the transport system to advance the head system in the first direction over the substrate while dispensing drop sets from dispenser sets, such would be inherently disclosed as the inkjet printers are operated by a software and its processor that communicates with the head system and transport system for printing

purposes (*see also* column 8, which implicates that the fabrication is, “automated,” which would necessarily require a processor comprising a software which moves the head system and transport system), thereby anticipating claims 26-28 and 35.

With regard to the limitation, each dispenser set depositing a drop set at a distance ahead of a drop set deposited by a preceding dispenser set, this limitation is also inherent for the following reasons.

As evidenced by Figure 3, and the disclosure on column 10, beginning at line 24, when a head comprising dispenser set for the monomers T (left most side of the head), G, A, and C (right most side of the head) is employed to print an array which begins with the nucleotide T at one area and the array which begins with the nucleotide G at the adjacent area, such would require the head to move from left to right direction (x-axis), and the monomer T would be dispensed by the first dispenser, followed by the second dispenser dispensing its droplet (the monomer G) “ahead” of the first droplet (monomer T), thereby anticipating claims 20 and 21.

With regard to claim 22, the printer would repeat the above steps after the paper feeds downwards (along y-axis, thus a next position), so as to print the second line of the text/shapes.

With regard to claim 25, the dispenser is an inkjet (column 14, line 36).

With regard to claims 29-34, the monomers are biopolymers (column 3, lines 55-56; column 9, lines 43-50).

Response to Arguments:

Applicants’ arguments regarding that Blanchard does not disclose or suggest an apparatus wherein a processor controls the head system such that the dispenser sets pass over a given location on the substrate as the head system advances in the first direction, with each dispenser set depositing a drop set at a distance ahead of a drop set deposited by a preceding dispenser set (page 8, 4<sup>th</sup>

paragraph, Response) is not found persuasive since the Applicants' claim interpretation of the limitation imposed by the phrase, "a head system with multiple successive sets of dispensers" is different from the interpretation the examiner of record. As already explained above, the above-recited limitation reads on a single head system comprising multiple orifices which dispense the nucleotide monomers.

Blanchard, as evidenced by Figure 3, and the disclosure on column 10, beginning at line 24, discloses that when a head comprising dispenser set for the monomers T (left most side of the head), G, A, and C (right most side of the head) is employed to print an array which beings with the nucleotide T at one area and the array which beings with the nucleotide G at the adjacent area, such would require the head to move from left to right direction (x-axis), and the monomer T would be dispensed by the first dispenser, followed by the second dispenser dispensing its droplet (the monomer G) "ahead" of the first droplet (monomer T).

With regard to Applicants' unsubstantiated statement that the distance between adjacent feature rows within any of the arrays is less than the distance between adjacent dispenser sets limitation is not taught by Blanchard, this statement is not found persuasive because claims are drawn to a product (i.e., an apparatus), and Applicants' have not provided any evidence to the contrary that the apparatus of Blanchard cannot produce the effect that the claimed apparatus is capable of achieving. It is respectfully submitted that because PTO does not have the facility to conduct experiments, the burden of distinguishing proof rests on the Applicants. A simple and unsubstantiated statement that the apparatus of the prior art is not capable of achieving the apparatus of the claims without producing any scientific reasoning, logic, or evidence would not be found convincing.

*Conclusion*

No claims are allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*Inquiries*

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Young J. Kim whose telephone number is (571) 272-0785. The Examiner is on flex-time schedule and can best be reached from 8:30 a.m. to 4:30 p.m (M-W and F). The Examiner can also be reached via e-mail to [Young.Kim@uspto.gov](mailto:Young.Kim@uspto.gov). However, the office cannot guarantee security through the e-mail system nor should official papers be transmitted through this route.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. Gary Benzion, can be reached at (571) 272-0782.

Papers related to this application may be submitted to Art Unit 1637 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If applicant does submit a paper by FAX, the original copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office. All official documents must be sent

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to the Official Tech Center Fax number: (571) 273-8300. For Unofficial documents, faxes can be sent directly to the Examiner at (571) 273-0785. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1600.



Young J. Kim  
Primary Examiner **YOUNG J. KIM**  
Art Unit 1637 **PRIMARY EXAMINER**  
9/5/2006

YJK